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## Your Well: What to Do After the Flood

## **Well and Pump Inspection**

**Flood Conditions at the Well:** Swiftly moving flood water can carry large debris that could loosen well hardware, dislodge well construction materials, or distort casing. Coarse sediment in the flood waters could erode pump components. If your well is not tightly capped, sediment and flood water could enter the well and contaminate it. Wells that are more than 10 years old or less than 50 feet deep are likely to be contaminated, even if there is no apparent damage. Floods may cause some wells to collapse.

**WARNING:** There is a danger of electrical shock and damage to your well and pump if they have been flooded. Rubber boots and gloves are not adequate protection from electric shock.

**WARNING:** Do not drink, cook, or wash with water from a private well that has been flooded. It can make you sick.

Electrical System - After flood waters have receded and the pump and electrical system have dried, do not turn on the equipment until the wiring system has been checked by a qualified electrician, well contractor, or pump contractor. If the pump control box was submerged during the flood, all electrical components must be dry before electrical service can be restored. Get help from a well or pump contractor in turning on your pump.

**Pump Operation:** All pumps and their electrical components can be damaged by sediment and flood water. The pump, including the valves and gears, will need to be cleaned of silt and sand. If the pump is not cleaned and properly lubricated, it can burn out. Get help from a well or pump contractor who will be able to clean, repair or maintain different types of pumps.

## **Emergency Disinfection of Flooded Wells**

Before disinfection: Check the condition of your well. Make sure there is no exposed or damaged wiring. If you notice any damage, call a professional before the disinfection process.

**Step 1:** If your water is muddy or cloudy, run the water from an outside spigot with a hose attached until the water becomes clear and free of sediments.

#### **Disinfection Materials:**

- One gallon of non-scented household liquid bleach;
- rubber gloves;
- eye protection;
- old clothes; and
- a funnel.

**Step 2:** Determine what type of well you have and how to pour the bleach into the well. Some wells have a sanitary seal with either an air vent or a plug that can be removed. If it is a bored or dug well, the entire cover can be lifted off to provide a space for pouring the bleach into the well.

**Step 3:** Take the gallon of bleach and funnel (if needed) and carefully pour the bleach down into the well casing.

**Step 4:** After the bleach has been added, run water from an outside hose into the well casing until you smell chlorine coming from the hose. Then turn off the outside hose.

**Step 5:** Turn on all cold water faucets, inside and outside of your house, until you detect a chlorine odor in each faucet, then shut them all off. If you have a water treatment system, switch it to bypass before turning on the indoor faucets.

**Step 6:** Wait 6-24 hours before turning the faucets back on. **It is important not to drink, cook, bathe, or wash with this water during the time period** – it contains high amounts of chlorine.

**Step 7:** Once the waiting period is up, turn on an outside spigot with a hose attached and run the water into a safe area where it will not disturb plants, lakes, streams, or septic tanks. Run the water until there is no longer a chlorine odor. Turn the water off.

**Step 8:** The system should now be disinfected, and you can now use the water.

**Step 9:** Have your water tested for bacteria 7-10 days after disinfection.

Well disinfection will not provide protection from pesticides, heavy metals and other types of non-biological contamination. If such contamination is suspected, due to the nearness of these contaminant sources, special treatment is required.

## Sampling and Testing Well Water

Three laboratories in Helena offer well sampling and testing for contamination. They are:

- Alpine Analytical, 449-6282
- Energy Laboratories, 442-0711
- State of Montana Public Health Laboratory, 444-2642

If you have questions about the safety of your well water, contact the Lewis & Clark City-County Health Department, Environmental Services Division, at 447-8351. More flood information is available online at <a href="https://www.co.lewis-clark.mt.us/flooding">www.co.lewis-clark.mt.us/flooding</a>

# USE ONLY PROPERLY DISINFECTED WATER FOR DRINKING, COOKING, MAKING DRINKS (INCLUDING BABY FORMULA), OR BRUSHING TEETH

Use **bottled water** that has not been exposed to flood waters if it is available.

If you don't have bottled water, you should **boil water** to make it safe. Boiling will kill most types of disease-causing organisms that may be present. If the water is cloudy, filter it through clean cloths or allow it to settle, then draw off the clear water for boiling. **Boil the water for 5 minutes**, let it cool, and store it in clean containers with covers.

If you can't boil water, **disinfect it using household bleach**. Bleach will kill some, but not all, types of disease-causing organisms. If the water is cloudy, filter it through clean cloths or allow it to settle, then draw off the clear water for disinfection. **Add 5 drops** of regular, unscented, liquid household bleach **for each quart of water**, stir it well, and let it stand for 30 minutes before you use it. Store in clean containers with covers.